

IN THE CLAIMS:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Currently amended) A method of activating a CFTR protein comprising:

applying a polypeptide to a CFTR protein which forms a cAMP regulated chloride channel, said polypeptide comprising a contiguous portion of CFTR protein of between about 18 and 100 amino acid residues, said portion comprising the 18 contiguous amino acid residues ~~as~~ shown in SEQ ID NO: 1, whereby the open probability of the channel formed by the CFTR increases by at least 25%.
9. (Original) The method of claim 8 wherein the open probability of the channel formed by the CFTR increases by at least 50%.
10. (Original) The method of claim 8 wherein the open probability of the channel formed by the CFTR increases by at least 75%.
11. (Original) The method of claim 8 wherein the open probability of the channel formed by the CFTR increases by at least 100%.
12. (Original) The method of claim 8 wherein the open probability of the channel formed by the CFTR increases by at least 125%.

13. (Original) The method of claim 8 wherein the open probability of the channel formed by the CFTR increases by at least 150%.
14. (Original) The method of claim 8 wherein the open probability of the channel formed by the CFTR increases by at least 200%.
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)
18. (Original) The method of claim 8 wherein the CFTR protein is in a lipid bilayer and a change in conductance is measured upon applying the polypeptide.
19. (Cancelled)
20. (Cancelled)
21. (Currently amended) A method of activating a CFTR protein comprising:
applying a polypeptide to a CFTR protein which forms a cAMP regulated chloride channel, said polypeptide comprising a contiguous portion of CFTR protein of between 22 and 100 amino acid residues, said portion comprising the 22 contiguous amino acid residues ~~as~~ shown in SEQ ID NO: 2, whereby the open probability of the channel formed by the CFTR increases by at least 25%.
22. (Original) The method of claim 21 wherein the open probability of the channel formed by the CFTR increases by at least 50%.
23. (Original) The method of claim 21 wherein the open probability of the channel formed by the CFTR increases by at least 75%.
24. (Original) The method of claim 21 wherein the open probability of the channel

formed by the CFTR increases by at least 100%.

25. (Original) The method of claim 21 wherein the open probability of the channel formed by the CFTR increases by at least 125%.

26. (Original) The method of claim 21 wherein the open probability of the channel formed by the CFTR increases by at least 150%.

27. (Original) The method of claim 21 wherein the open probability of the channel formed by the CFTR increases by at least 200%.

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Original) The method of claim 21 wherein the CFTR protein is in a lipid bilayer and a change in conductance is measured upon applying the polypeptide.

32. (Cancelled)

33. (Cancelled)

34. (Original) The method of claim 8 or 21 wherein the polypeptide is free of phosphorylation.